

DEVICE AND METHOD FOR CLEANING BODY PARTS

CROSS-REFERENCE

[0001] This application claims the benefit of U.S. Provisional Application No. 60/432,121, filed December 9, 2002, which application is incorporated herein, in its entirety, by reference thereto.

FIELD OF THE INVENTION

[0002] The present invention relates to devices for cleaning body parts, more particularly to devices for cleaning the feet of a user.

BACKGROUND OF THE INVENTION

[0003] When bathing in a shower or otherwise bathing in a standing position, some bathers have particular difficulty in washing their feet. This is particularly true for overweight persons, persons with some types of physical handicaps, and elderly persons. However, bathing of the feet poses risks even for persons outside these categories, since the person must generally bend over and balance on one foot while bathing the other, which increases the risks of falling and injury in the shower.

[0004] Previous approaches to making foot bathing safer and easier while showering have been attempted, all of which leave some need for improved devices. U.S. Patent No. 6,253,407 to Bjelkevig provides a foot scrubber which may attach to the shower floor for use by a person taking a shower. However, this scrubber provides only brush bristles, and the bather must still apply soap, either to the foot or to the scrubber bristles themselves.

[0005] U.S. Patent No. 3,973,286 discloses a foot cleaning apparatus which comprises a treadle in a housing. In response to depression of the treadle by a user, a bellows is pressurized causing a foot cleaning solution to be dispensed from the bellows, through a conduit and onto a pair of horizontally disposed, rotatable brushes. The toes of the user are inserted between the brushes to scrub and clean them. Astro turf is provided beneath the main portion of the foot. However, the scrubbing action is focused on the toes and this is where the cleaning solution is delivered as well. Since the toe end of the device is closed-ended, it is difficult, if not impossible to establish an adequate brushing stroke for cleaning the bottom of the foot.

[0006] Various other scrubbing brushes have been proposed, such as those disclosed in U.S. Patent Nos. Des. 363,378 and 6,405,400. However, these again lack an automatic feature for soaping the foot.

[0007] It would be desirable to provide a device which facilitates both soaping and scrubbing of the feet without the need for the user to bend over to apply either soap or scrubbing action, thereby increasing the safety and convenience of the bather.

SUMMARY OF THE INVENTION

[0008] The present invention provides devices and methods for cleansing body parts. One example of a device is described as including a base portion and a pair of side wall portions extending upwardly from the base portion. Each of the side wall portions may include scrubbing means extending inwardly therefrom, toward the other inner wall of the device. Scrubbing means are mounted on the upper surface of the base portion and extend between the scrubbing means mounted on the inner walls of the side wall portions. A cleansing material support is provided for supporting cleansing material to extend through an opening provided in the scrubbing means on the base portion. The cleansing material support is biased with respect to the base portion and positioned to support the cleansing material at a height to readily make contact with a user's foot as a user slides the foot over the scrubbing means.

- [0009] The cleansing material support extends to a level slightly lower than a top surface of the scrubbing means on the base portion, thereby preventing sliding of the cleansing material during use.
- [0010] The cleansing material may thus be mounted on the cleansing material support and thereby maintained at an appropriate height for easily soaping the foot as it is passed over the device, while at the same time preventing the cleansing material from sliding out of position as the foot rubs against it.
- [0011] The device may further include at least one fixation means, such as a suction cup, or the like, extending from the device and adapted to fix the device to a stationary object. One or more suction cups may be provided to extend from beneath the base portion and/or from one or more side wall portions.
- [0012] A method of washing a foot is provided, including providing a cleansing device having a scrubbing surface and cleansing material biased so as to extend above the scrubbing surface; contacting the foot with the scrubbing surface; and sliding the foot to pass over the cleansing material.
- [0013] By continuing to slide the foot in a same direction, the cleansing material is applied to the foot as it passes over the cleansing material, and the foot is scrubbed after passing the cleansing material and contacting the scrubbing surface.
- [0014] The foot may then be slid in a reverse direction to repeat the process, wherein the scrubbing surface is provided on opposite sides of the cleansing material so that the foot contacts the scrubbing surface after passing over the cleansing material in either direction.
- [0015] The top surface of the cleansing material is maintained above the scrubbing surface, even as the cleansing material diminishes through use.
- [0016] The cleansing device may further include side scrubbing surfaces extending substantially perpendicularly to the scrubbing surface, wherein the method may further include sliding a portion of the foot against at least one of the side scrubbing surfaces.
- [0017] These and other advantages and features of the invention will become apparent to those persons skilled in the art upon reading the details of the invention as more fully described below.

BRIEF DESCRIPTION OF THE DRAWINGS

- [0018] Fig. 1 is a perspective view of an example of a device for cleaning body parts according to the present invention.
- [0019] Fig. 2 is a sectional view of the device of Fig. 1.
- [0020] Fig. 3 is a top view of the device shown in Fig. 1.
- [0021] Fig. 4 is an end view of the device shown in Fig. 1.
- [0022] Fig. 5 is a side view of the device shown in Fig. 1.

DETAILED DESCRIPTION OF THE INVENTION

- [0023] Before the present devices are described, it is to be understood that this invention is not limited to particular embodiments described, as such may, of course, vary. It is also to be understood that the terminology used herein is for the purpose of describing particular embodiments only, and is not intended to be limiting, since the scope of the present invention will be limited only by the appended claims.
- [0024] Unless defined otherwise, all technical and scientific terms used herein have the same meaning as commonly understood by one of ordinary skill in the art to which this invention belongs. Although any methods and materials similar or equivalent to those described herein can be used in the practice or testing of the present invention, the preferred methods and materials are now described. All publications mentioned herein are incorporated herein by reference to disclose and describe the methods and/or materials in connection with which the publications are cited.
- [0025] It must be noted that as used herein and in the appended claims, the singular forms "a", "and", and "the" include plural referents unless the context clearly dictates otherwise. Thus, for example, reference to "a side" includes a plurality of such sides and reference to "the spring" includes reference to one or more springs and equivalents thereof known to those skilled in the art, and so forth.
- [0026] The publications discussed herein are provided solely for their disclosure prior to the filing date of the present application. Nothing herein is to be construed

as an admission that the present invention is not entitled to antedate such publication by virtue of prior invention. Further, the dates of publication provided may be different from the actual publication dates which may need to be independently confirmed.

[0027] Referring now to Fig. 1, a perspective view of a device 1 for cleaning body parts, particularly the feet of a bather, is shown. Device 1 includes a pair of sidewall portions 10, the internal wall of each of which include means for scrubbing 12 a body part. The means for scrubbing 10 in Fig. 1 are shown as brush bristles, however, alternative scrubbing means such as sponges, cloth, textured cloth, or other materials useful for washing/scrubbing the body may be substituted. A base portion 14 is provided to support the sidewall portions 10 and the entire device. Base portion 14 also includes scrubbing means 16 mounted on the top surface thereof, which may be the same or different from the scrubbing means 12 mounted on sidewall portions 10.

[0028] An opening is formed in scrubbing means 12, preferably in the center portion of scrubbing means 12, for placement of a bar of soap or other cleansing material 18 which is preferably a solid, dimensioned to fit within the central opening, most preferably a bar of soap. A cleanser support 20 is movably mounted with respect to base portion, and is biased upwardly to provide an automatic adjustment mechanism that ensures that the top surface of the cleansing material extends at least flush with, and preferably extends above, the top surface formed by scrubbing means 16. However, the top surface of cleanser support 20 does not extend beyond a positions slightly lower than the top surface formed by scrubbing means 16. This ensures that cleansing material 18 does not slide out of position as a user's foot is slid over it.

[0029] Biasing of the cleanser support is provided by biasing means 22 provided between cleanser support 20 and base portion 14, such as by one or more springs, as shown in Fig. 2. Although coil springs are shown, other biasing means, such as leaf springs, elastomeric material, or other equivalent biasing mechanisms may be substituted.

[0030] Referring to Fig. 3, use of the device may be by a user sliding his/her foot in

the directions of the arrows, back and forth over the cleansing material 18 and scrubbing means 16. Each time the foot passes over cleansing material 18 the foot is soaped or applied with cleansing material and is then scrubbed by scrubbing means 16 as it passes over scrubbing means 16 in either direction. Additionally, the sides and top of the foot may be scrubbed against scrubbing means 12 without the need for manually applying cleansing material once a lather has been built up.

[0031] Fig. 4 shows the capability of cleanser support 20 to extend cleansing material above the top level of scrubbing means 16. This ensures good contact between the user's foot and the cleansing material, and also makes it possible to continue using the cleansing material, even as it wears down and gets thin, substantially until it is used up.

[0032] Device 1 may be provided with stabilizing means, such as suction cups 24, shown in Fig. 5, for example, to attach it to a shower or bathtub floor. This prevents the device from moving around during use, enhancing the safety of its use and facilitating ease of use. Of course, other fixing means may be used, as would be readily apparent to those of ordinary skill in the art. For example, device 1 may be permanently fixed to a shower floor by any number of different fixation means such as screws, bolts, adhesives or the like. Further alternatively or additionally, one or more suction cups or other fixation means may be provided to extend from a side portion 10 of device 1 for primary fixation, or supplemental fixation of device 1 to a wall of a bathtub or shower, for example.

[0033] Although scrubbing means 12 and 16 are shown to have substantially planar scrubbing contours, any or all of these surfaces may be contoured, such as to more closely follow an arch shape contour (e.g., scrubbing means 16), or to contour scrubbing means 12 to have a parabolic or hyperbolic contour so as to provide wider openings at the ends of device 1, for example.

[0034] While the present invention has been described with reference to the specific embodiments thereof, it should be understood by those skilled in the art that various changes may be made and equivalents may be substituted without departing from the true spirit and scope of the invention. In addition, many modifications may be made to adapt a particular situation, material, composition of matter, process,

process step or steps, to the objective, spirit and scope of the present invention. All such modifications are intended to be within the scope of the claims appended hereto.